

(1) Action

Forming non-reducing saccharides having a trehalose structure as an end unit and having a degree of glucose polymerization of at least 3 from reducing amylaceous saccharides having a degree of glucose polymerization of at least 3;

(2) Molecular weight

About 69,000-79,000 daltons on sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE);

(3) Isoelectric point (pI)

About 5.4-6.4 on isoelectrophoresis;

(4) Thermostability

Substantially not inactivated even when incubated in an aqueous solution (pH 7.0) at 85°C for 60 min.; and

(5) Partial amino acid sequence

Having an amino acid sequence of at least two contiguous amino acid residues in SEQ ID NO:3 and/or SEQ ID NO:4 and being encoded by a chromosomal DNA which hybridizes to a probe having the nucleotide sequence of 5'-AAYYTNTGGTAYTTYAARGA-3' (SEQ ID NO:7) and a probe having the nucleotide sequence of 5'-GARGARTGGCAYWSNATHAT-3' (SEQ ID NO:8).